

# METHOD AND APPARATUS FOR IN SITU DETERMINATION OF MOLTEN POLYCARBONATE COMPOSITION USING ELECTRONIC ABSORPTION SPECTROSCOPY

## Abstract of Disclosure

The present invention relates to methods and devices for *in-situ* measurement of reaction components of interest during manufacturing of polycarbonate by melt polymerization. The present invention describes irradiating a molten polymer sample with UV/visible light, and generating an absorbance profile correlated to Fries products as well as uncapped phenolic groups in the sample. The methods and apparatus of the invention are suitable for monitoring of Fries products in reactions ranging in size from small scale combinatorial formats to production scale reactors. Also included in methods of the invention are univariate and multivariate analysis for prediction of linear Fries, branched Fries and uncapped phenolic end-groups in unknowns.

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